

1:10 Scale 2WD Electric Off Road Competition Buggy Kit Manual





#### # Introduction

Thank you for purchasing this Team Associated product. This assembly manual contains instructions and tips for building and maintaining your new vehicle. Please take a moment to read through the manual and familiarize yourself with the steps. We are continually changing and improving our designs; therefore, actual parts may appear slightly different than the illustrations. New parts will be noted on supplementary sheets located in the appropriate parts bags. Check each bag for these sheets before you start to build.

Check www.AssociatedElectrics.com for the latest versions of our instruction manuals

#### #RC10B7D Team Kit Features

- 5-gear laydown transmission with low profile motor mount moves weight of motor closer to the center of the car
- Long-arm suspension geometry improves grip and predictability in all conditions
- KPI adjustable steering and caster blocks allows for fine tuning steering feel. Three options are included in kit.
- · Vertical front outer ballstud allows fine tuning of roll center, camber gain, and link length
- Height adjustable aluminum front bulkhead allows for further tuning of front roll center
- Standard and HRC (High Roll Center) rear hubs included
- · Highly adjustable battery holder with thumb tabs allows for easy battery removal and fine tuning of weight bias
- 7075-T6 aluminum chassis with increased departure angle and optional weight plate pockets
- HD 69mm CVA bones and differential outdrives for improved durability
- Light-weight molded servo mount
- One-piece rear wing mount improves durability
- New 7-inch rear wing and 2.5-inch front wing
- · Low-profile body included
- · Shock tower covers front and rear
- 3.5mm turnbuckles and ballcups

#### # Additional

Your new RC10B7D Team Kit comes unassembled and requires the following items for completion (refer to www.AssociatedElectrics.com and www.Reedypower.com for suggestions):

- R/C two channel surface frequency radio system
- AA-size batteries for transmitter
- Electronic Speed Control ("ESC")
- Steering servo
- R/C electric motor (540 size)
- Pinion gear (48P), size determined by type/turn or kV of motor
- Battery charger (a peak detection charger, or LiPo compatible charger)

- 2 cell LiPo battery pack
- Polycarbonate specific spray paint
- Cyanoacrylate glue ("CA") (#1597)
- Thread locking compound (#1596)
- Tires and Inserts, Fronts and Rears
- Wheels w/12mm Hex Front Wheels #9690 (white), #9691 (yelllow)

Rear Wheels #9695 (white), #9696 (yelllow)

 Slim Front Wheels w/12mm Hex (carpet/astro turf) #91757 (white) #91758 (yelllow)

## # Other Helpful Items

- Silicone Shock Fluid (Refer to AssociatedElectrics.com for complete listings)
   Green Slime shock lube (#1105)
- FT Turnbuckle Wrench, 4mm (#1112) FT Body Reamer (#1499)
- FT Hex/Nut Wrenches (#1519)
- FT Universal Tire Balancer (#1498)
- FT Ballcup Wrench (#1579)
- Calipers or a Precision Ruler FT Body Scissors (#1737)
- Shock Pliers (#1681)
- Hobby Knife
- Wire Cutters
- Needle Nose Pliers
- Soldering Iron

Associated Electrics, Inc. 21062 Bake Parkway. Lake Forest, CA 92630



**Customer Service** Tel: 949.544.7500 Fax: 949.544.7501

# # Hardware - 1:1 Scale View

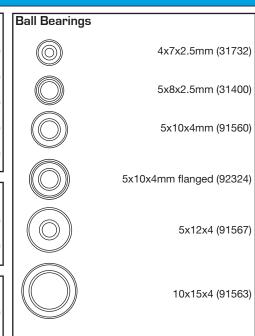
Button Head (bhcs)							
	2x4mm (31510)						
	2.5x6mm (31520)						
	3x6mm (31531)						
	3x8mm (31532)						
	3x10mm (25211)						
	3x12mm (89202)						
	3x14mm (25187)						
	3x16mm (89203)						
	3x18mm (2308)						
	3x22mm (25189)						
	3x24mm (89204)						

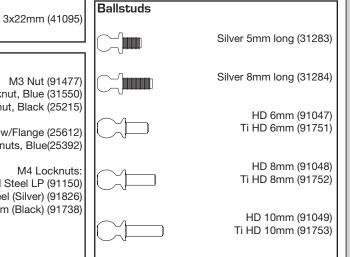
Shims and Washers	
	5.5x0.5mm (31381)
	5.5x1.0mm (31382)
	5.5x2.0mm (31383)
	3x8mm Washer (89218)

Set Screws	
	3x3mm (25225)
	3x12mm (81258)
	3x20mm (91737)

Flat Head (fhcs)	
	2x3mm (91749)
	3x8mm (25201)
	3x10mm (25202)
	3x12mm (25203)
	3x14mm (89208)
Cap Head (shcs)	
	1.6x5mm (91611)
	3x16mm (89224)
LP Socket Head (lp shcs)	
	3x6mm (41089)
	3x8mm (41096)

Ш							
Nuts (lock/plain)							
	M3 Nut (91477) M3 Alum. Locknut, Blue (31550) M3 Locknut, Black (25215)						
	M3 Locknut w/Flange (25612) FT 3mm Locknuts, Blue(25392)						
	M4 Locknuts: Serrated Steel LP (91150) Serrated Steel (Silver) (91826) Serrated Aluminum (Black) (91738)						







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## # Notes



This symbol indicates a special note or instruction in the manual.



This symbol indicates the number of the same part that is required.



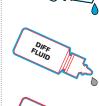
This symbol indicates the order within a step to assemble parts.



This symbol indicates there are optional FT parts available



This symbol indicates a Racers Tip.



SHOCK

This symbol indicates where Thread Lock Adhesive should be applied. \*not included

This symbol indicates where Diff Fluid should be applied.

This symbol indicates where Shock Fluid should be applied.



should be applied.
\*not included

This symbol indica



This symbol indicates where FT Diff Lube should be applied.
\*not included

This symbol indicates

where FT Silicone Grease



This symbol indicates where Black Grease should be applied.

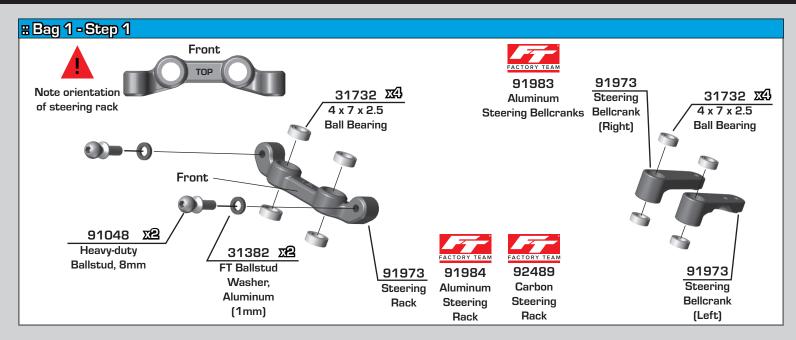


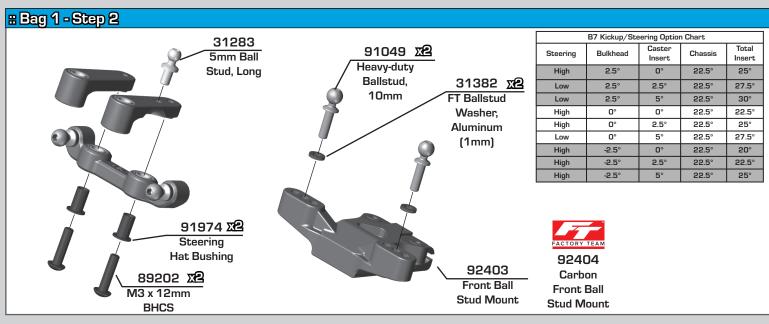
This symbol indicates where Green Slime can be applied.
\*not included

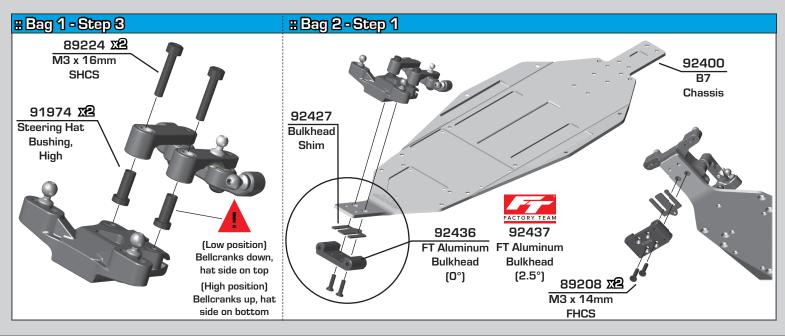


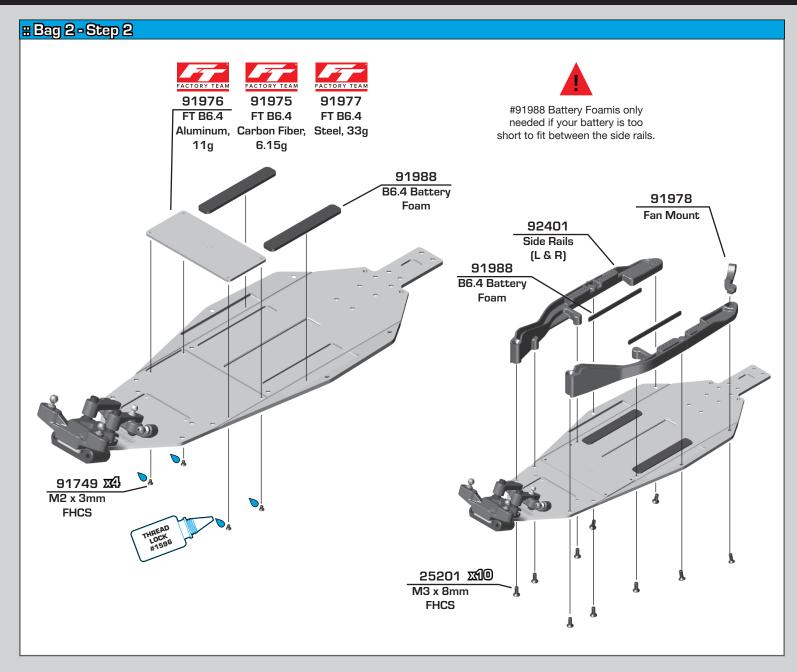
There is a 1:1 hardware foldout page in the front of the manual. To check the size of a part, line up your hardware with the correct drawing until you find the exact size. Each part in the foldout has a number assigned to it for ordering replacement parts.

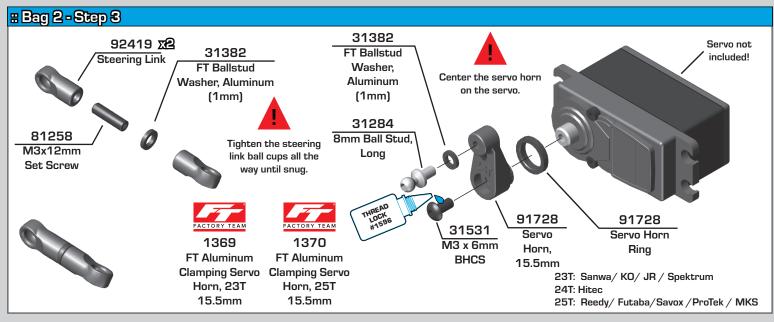
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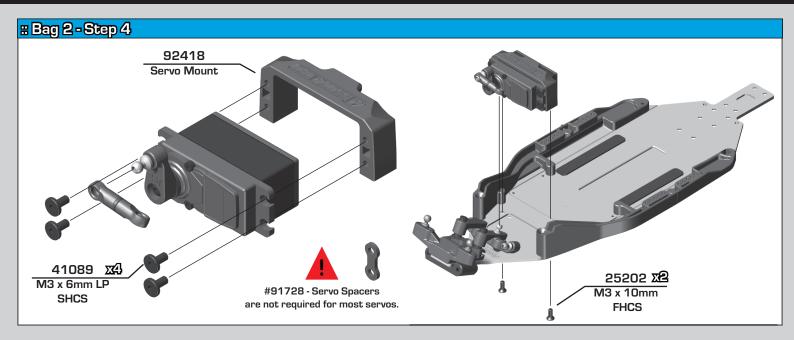


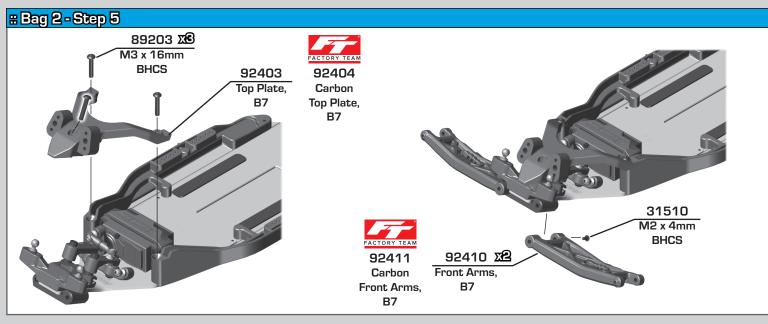


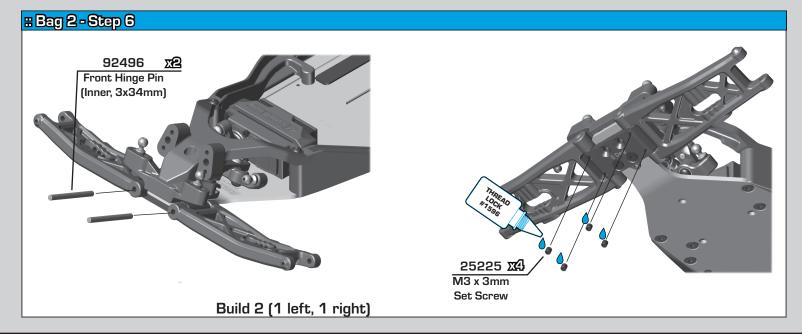


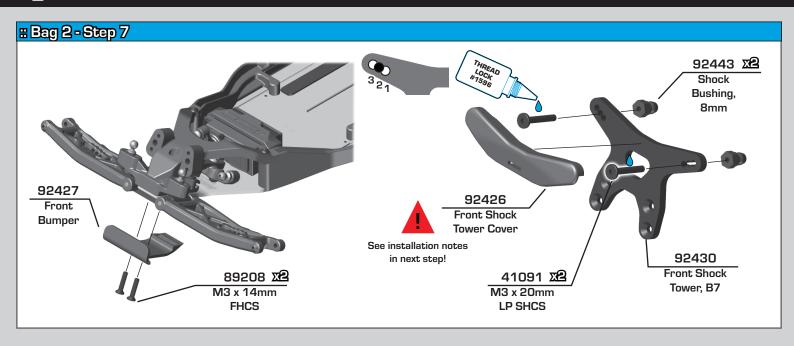












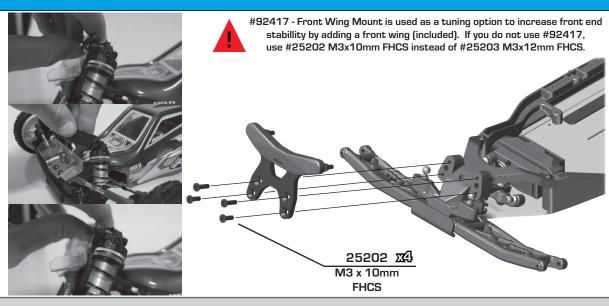
# #Bag 2-Step 8

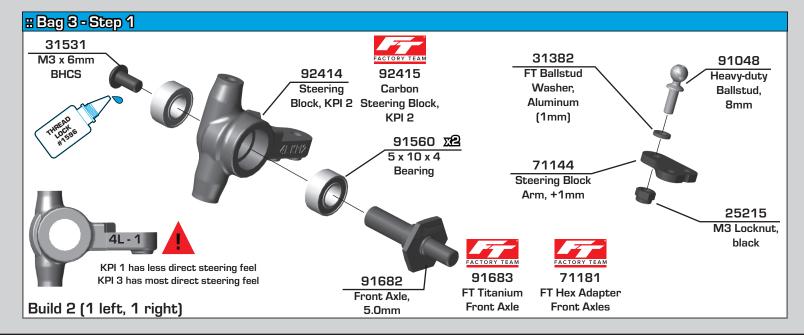


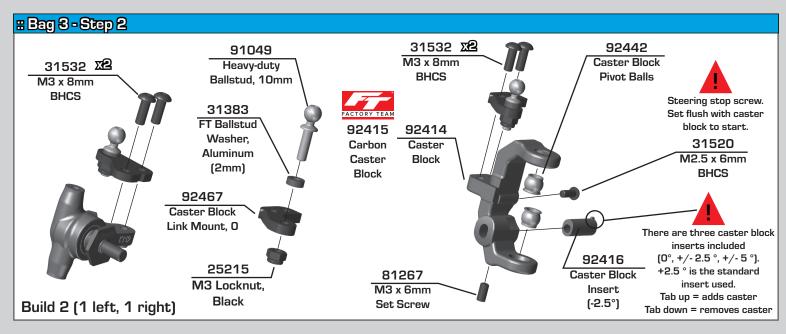
- Line up the front tower cover on the shock tower at an angle as shown in the 1st image to the right.
- Press firmly down on the center of the shock tower cover.

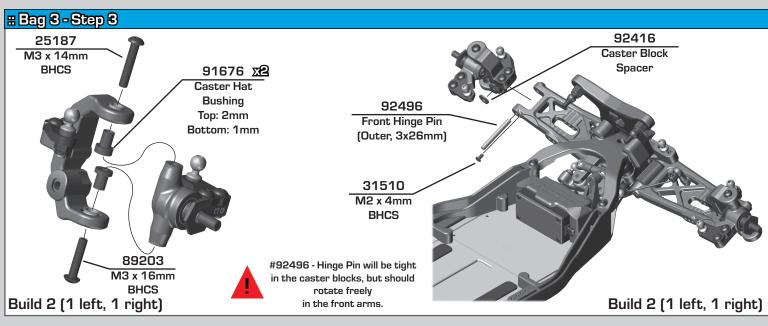
  Be sure to keep the tower cover centered on the tower.
- 3. The cover should snap into place with the tap locking on the back side of the tower.

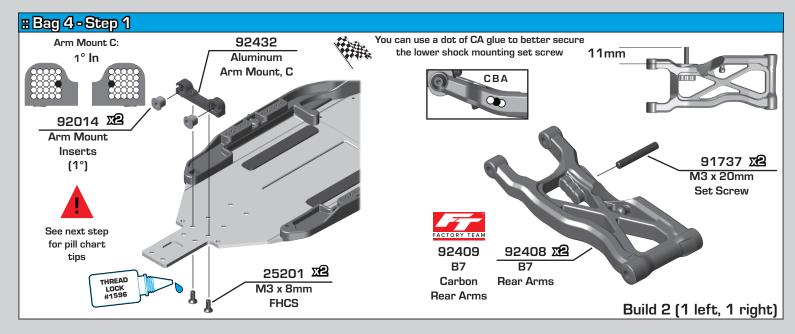
NOTE: The tower cover was designed to key into place with the supplied LP SHCS. Use of another screw type is not recommended.

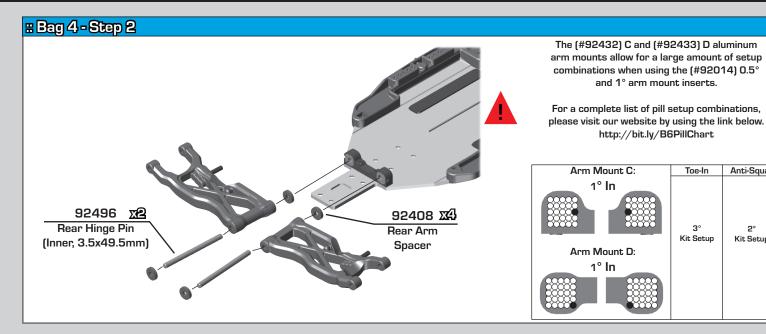






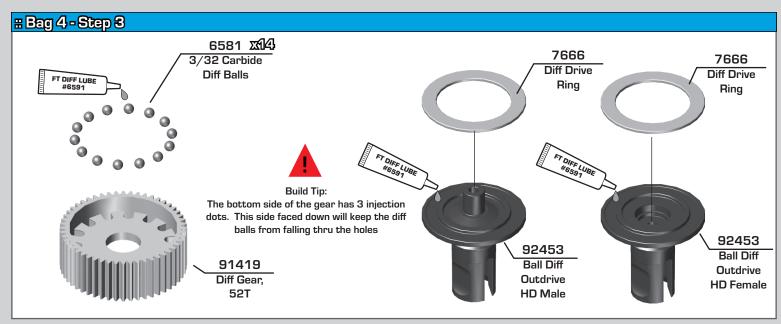


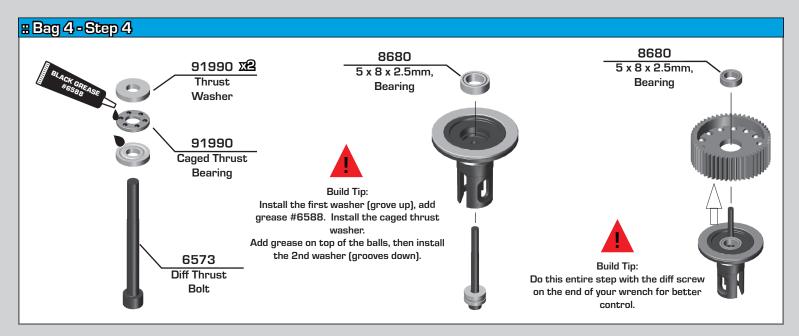




Anti-Squat

Kit Setup





# # Bag 4-Step 5





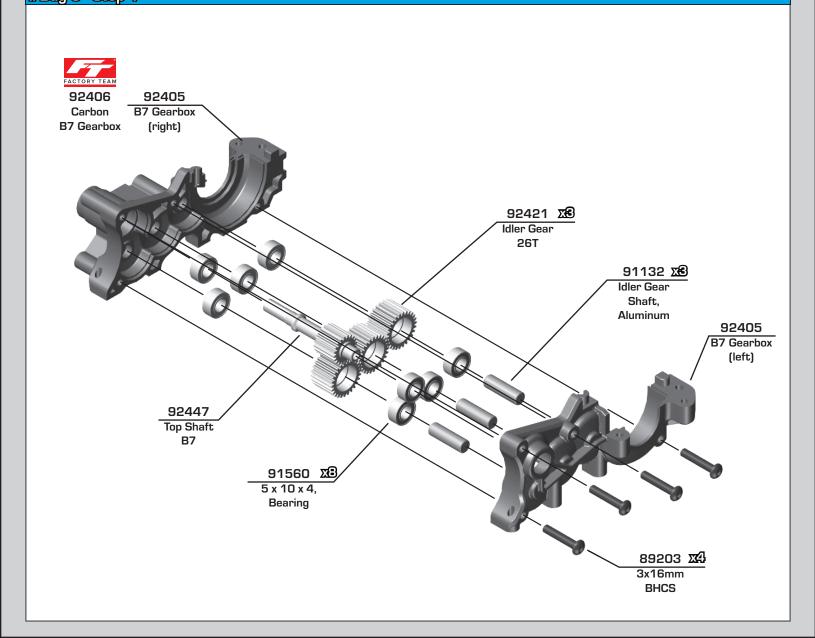
As you tighten the diff bolt, you will notice the T-nut ears moving closer to the bottom of the outdrive slot. This compresses the spring behind the T-nut. The spring should be completely

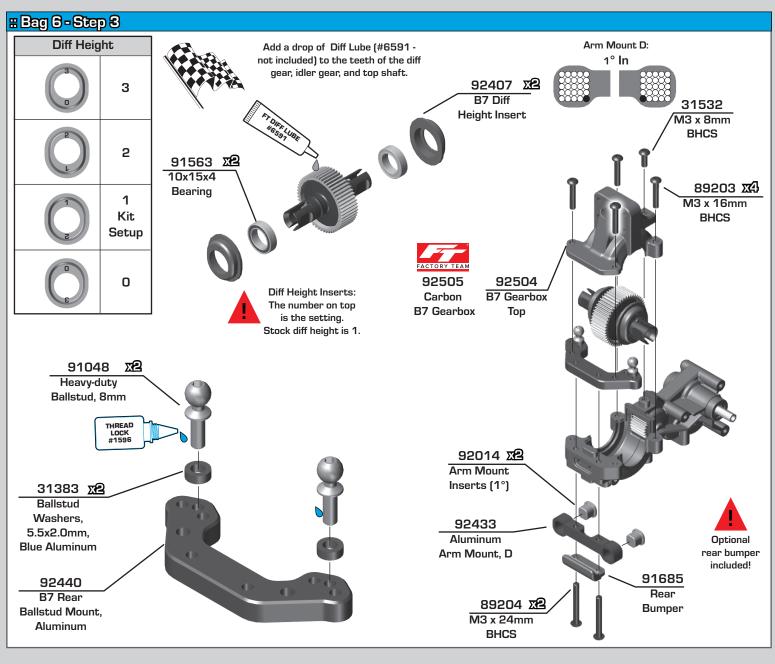
compressed at the time the T-nut reaches the end of the slot. Caution! Pay close attention to the feeling when the spring is completely compressed. Do not overtighten the bolt. When you feel the spring completely compressed, loosen the diff bolt 1/8 of a turn. Your diff should now operate smoothly but with resistance as the outdrives move in opposite directions.

resistance as the outdrives move in opposite directions. After you have driven the car once, re-check the diff setting.

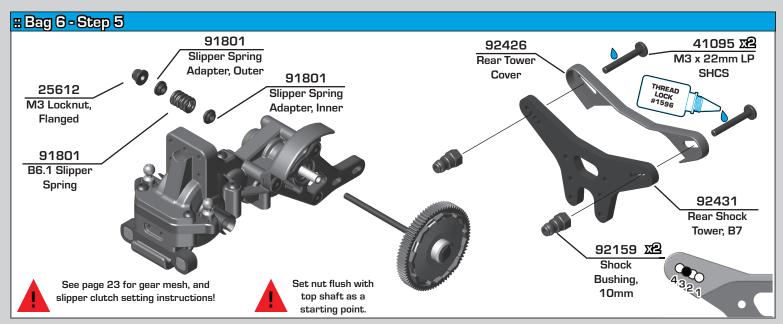


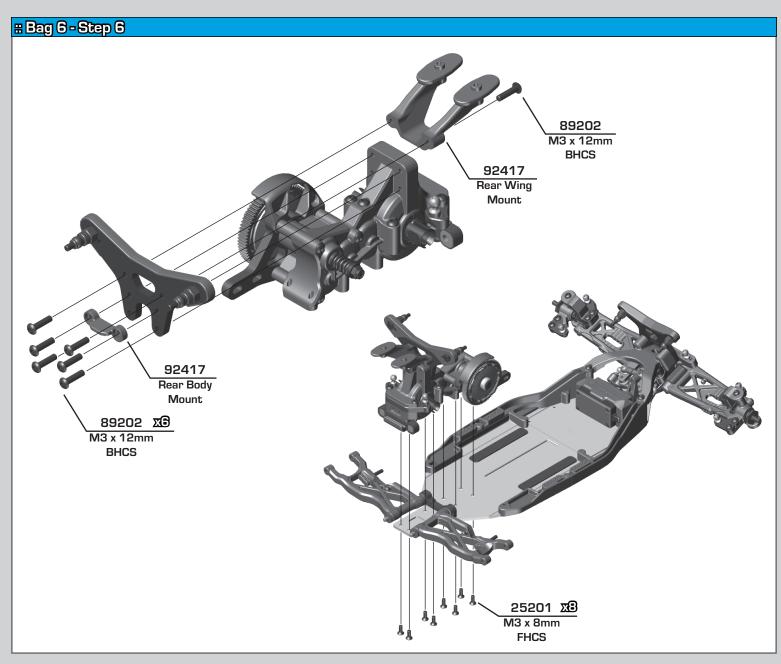
# #Bag 6-Step 1

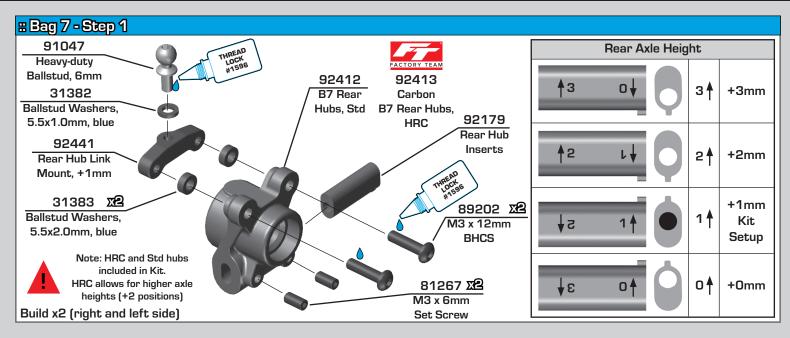


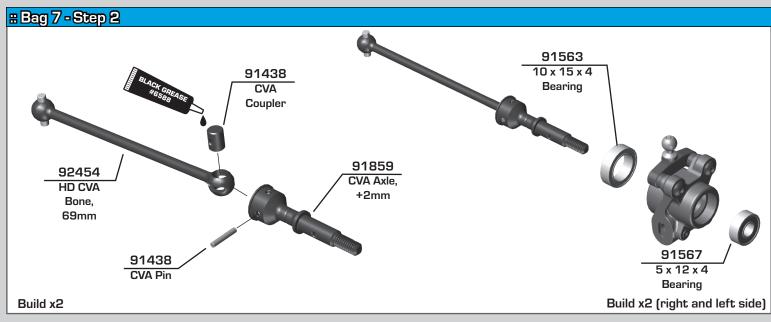


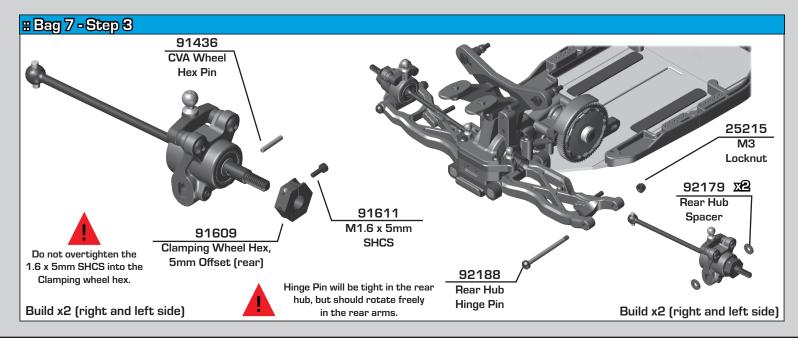


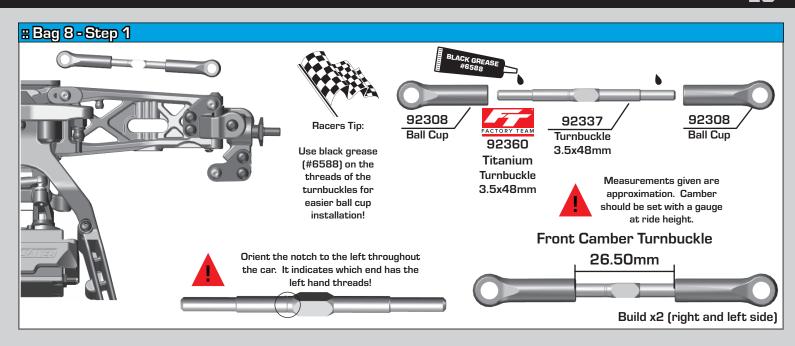


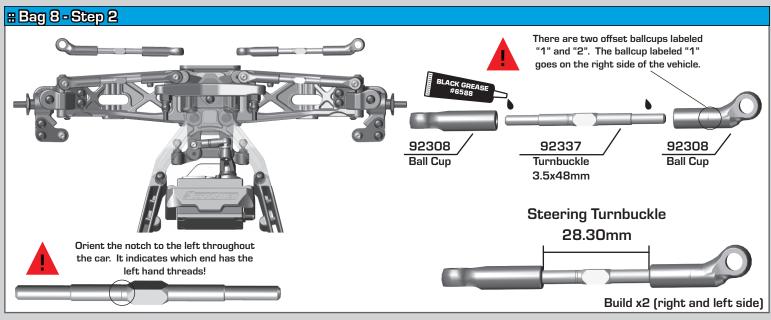


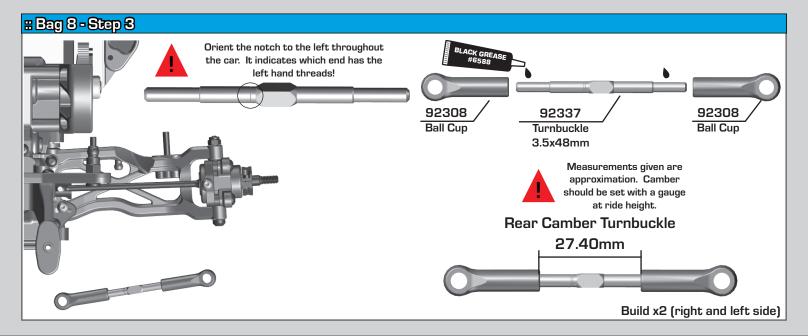


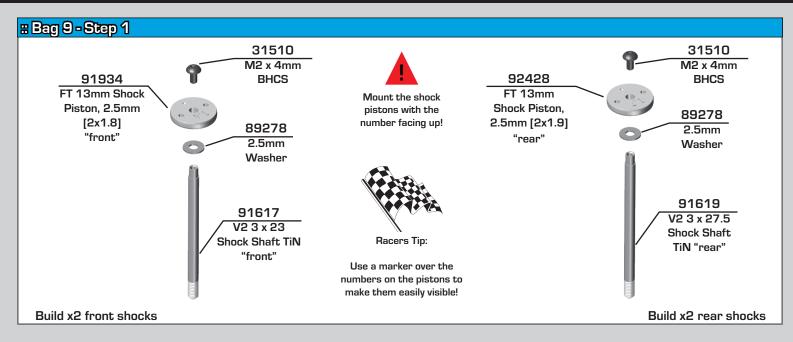


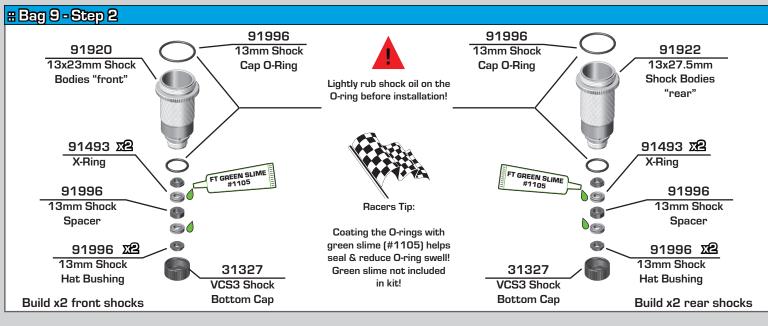


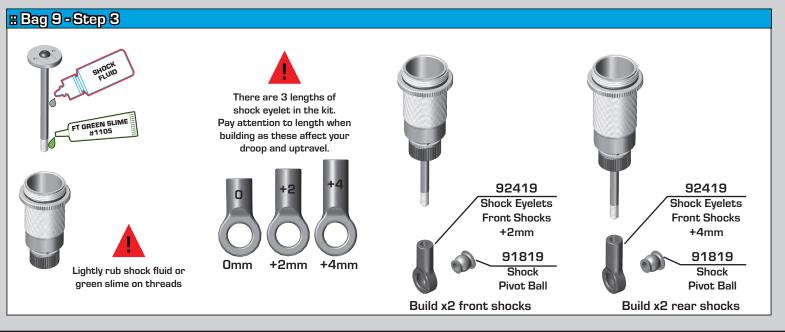


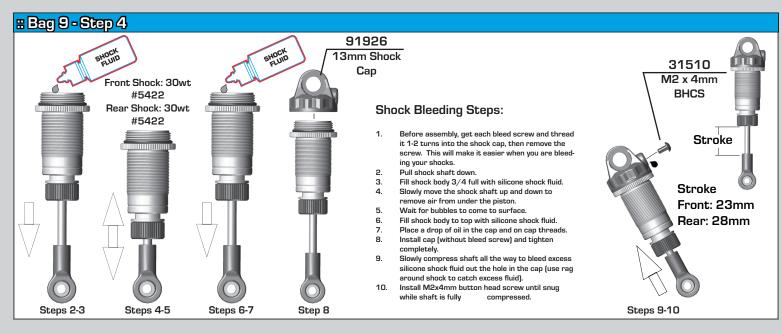


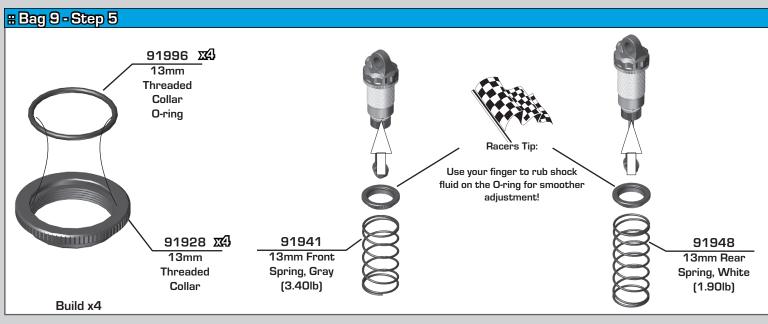


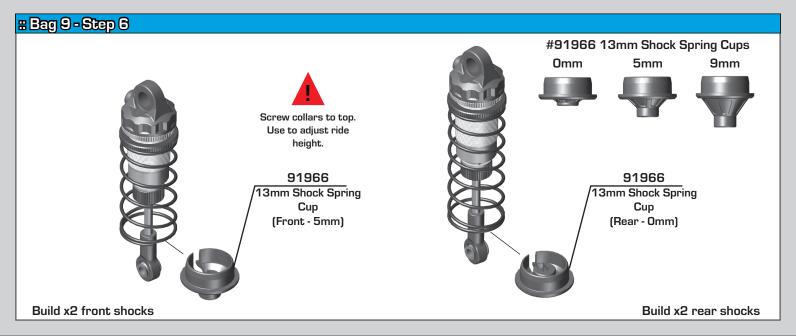


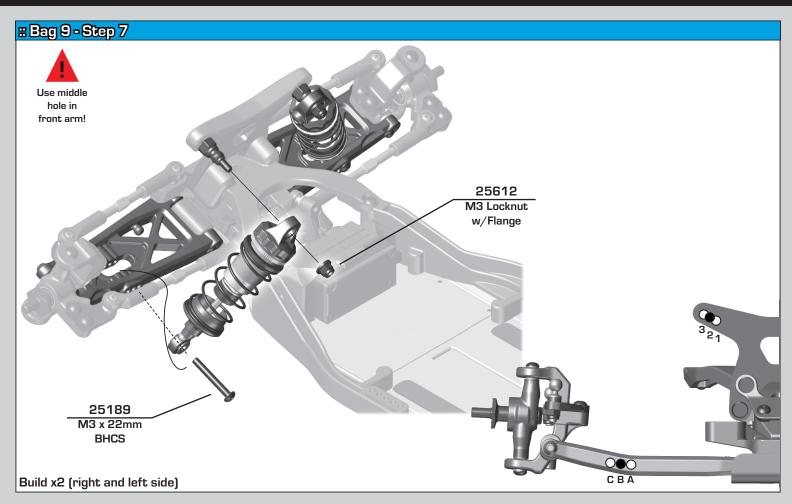


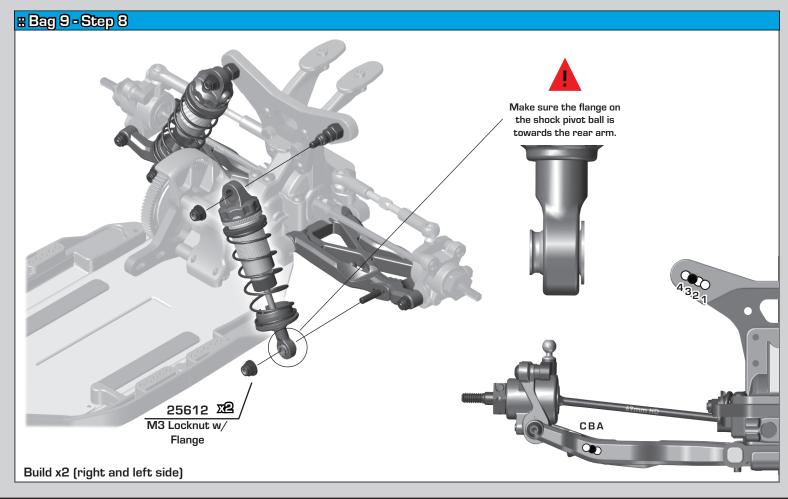


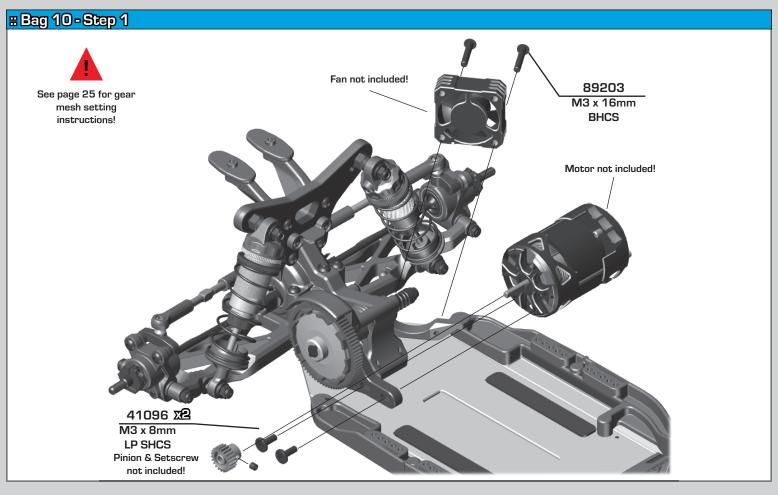


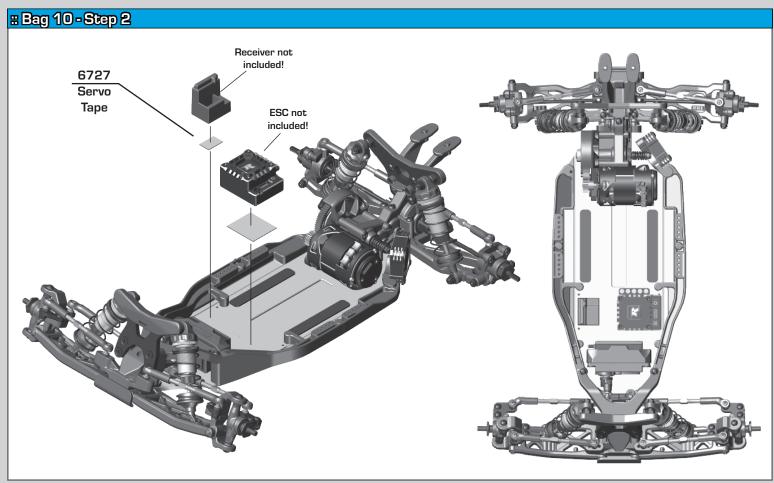


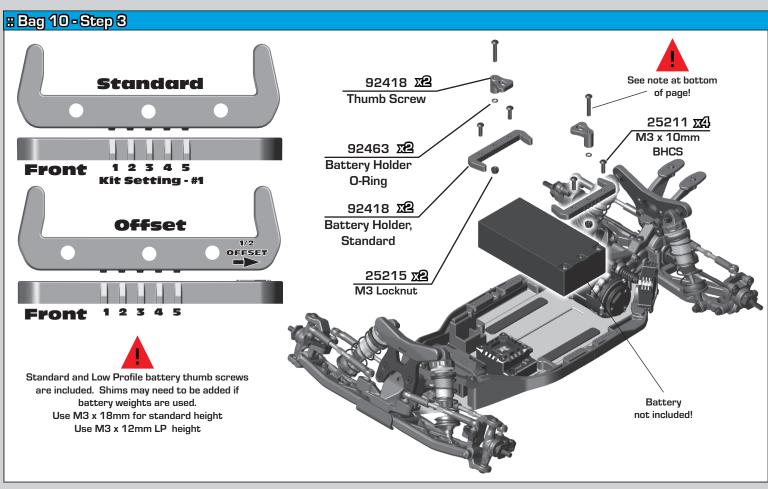


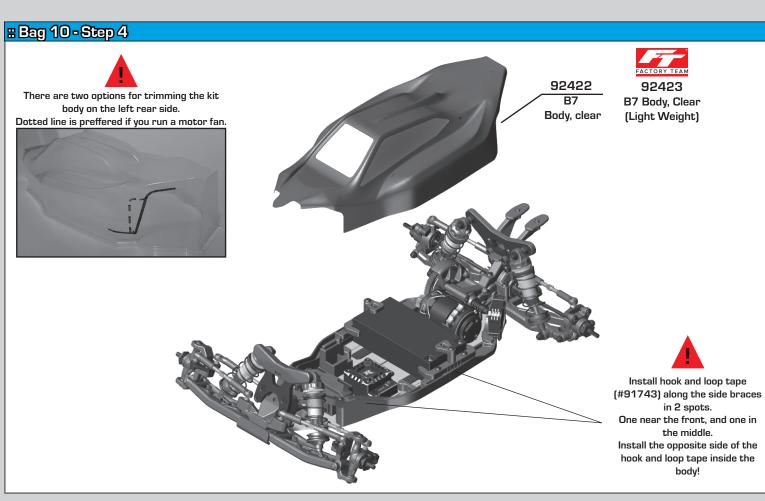


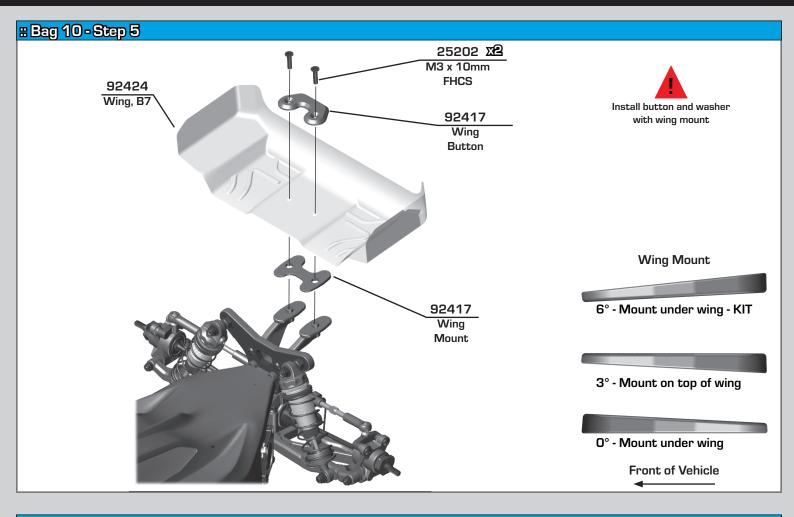


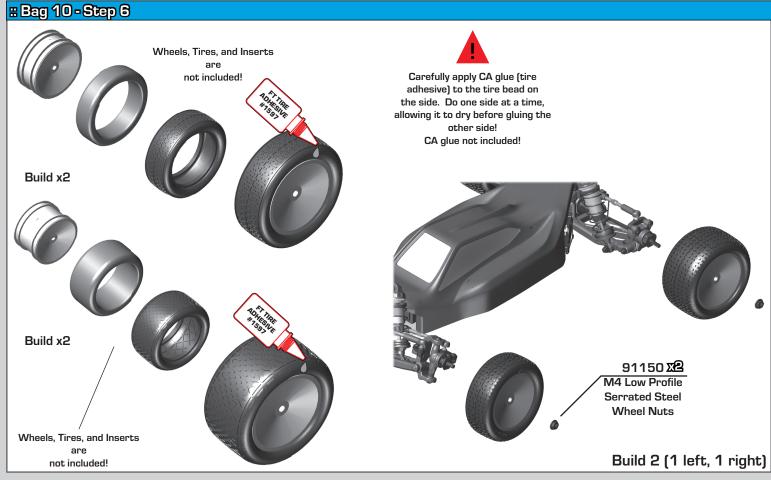












## # Tuning Tips - Painting, Beginners

## Painting:

Your Kit requires a clear polycarbonate body. You will need to prep the body before you can paint it.

Wash the INSIDE thoroughly with warm water and liquid detergent (do not use any detergents with scents or added hand lotion ingredients!). Dry the body using a clean, soft, lint-free cloth. Use the supplied window masks to cover the windows from the INSIDE of the body (RC bodies get painted on the inside). Using high quality masking tape, apply tape to the inside of the body to create a design. Spray (use either rattle can or airbrush) the paint on the inside of the body (preferably dark colors first, lighter colors last). NOTE: ONLY use paint that is recommended for (polycarbonate) plastics. If you do not, you can destroy the body! After the paint has completely dried (usually after 24 hours), cut the body along the trim lines. Make sure to drill or use a body reamer to make the holes for the antenna if needed! Use hook and loop tape to secure the body to the side rails of the vehicle.

## Tips for Beginners:

Before making any changes to the standard setup, make sure you can get around the track without crashing. Changes to your vehicle will not be beneficial if you can't stay on the track. Your goal is consistent laps. Once you can get around the track consistently, start tuning your vehicle. Make only ONE adjustment at a time, testing it before making another change. If the result of your adjustment is a faster lap, mark the change on the included setup sheet (make adddtional copies of the sheet before writing on it). If your adjustment results in a slower lap, revert back to the previous setup and try another change. When you are satisfied with your vehicle, fill in the setup sheet thoroughly and file it away. Use this as a guide for future track days or conditions. Periodically check all moving suspension parts. Suspension components must be kept clean and move freely without binding to prevent poor and/or inconsistent handling.

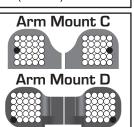
#### Rear Arm Mount Pill Insert Setup:

The aluminum rear arm mounts utilize eccentric pill inserts to make fine adjustments to anti-squat, toe, pin heights, and pin width. Adjustments can be made using the supplied inserts (#92014)

#### Standard Position

Use this position as a reference when changing pill locations.

> Toe: 3° Anti-squat: 2° Roll Center: +0 Pivot Width: +0



## Insert Hole Locations Number indicates degree of change: 0.5°, 1.0°, 0° (center dot)

Hole 0.5° or 0.35mm from center

> Hole 1.0° or 0.7mm from center

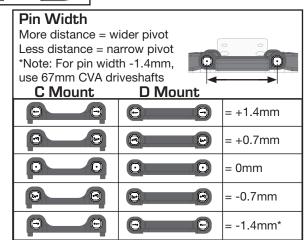
# Anti-squat Angle

More angle = More anti-squat Less angle = Less anti-squat

Shown in 1° changes C Mount **D** Mount

0	0	= 1°
0 0		= 0°
	0	= -1°
	0 0	= 2°
0 0	0 0	= 1°
0 0	0 0	= 0°
0	0	= 3°
0 0	0	= 2°

# Possible Insert Locations



# Toe Anale

	,						
More angle = More toe in							
_ess angl	less angle = Less toe in						
Shown in 1° changes  C Mount  D Mount							
C M	ount	D	Mount				
Θ_	9	Θ	Θ	= 3°			



For additional setup tips, please visit our website by using the link or QR code below.

http://bit.ly/B6PillChart



Pin Height Higher pin = Higher roll center Lower pin = lower roll center C Mount D Mount							
0	(i)	1	= +0.7°mm				
3	3	3	= +0.35°mm				
0 0	0	0	= 0mm				
0	•	•	= -0.35°mm				
0 0	0		= -0.7°mm				

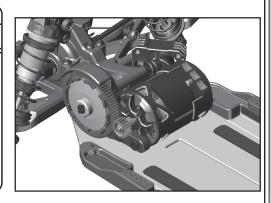
Shown in 1° chang <b>C Mount</b>	
9 9	<b>O O</b> = 3°
0 0	<b>O</b> = 4°
0	<b>e</b> = 5°
9 9	• = 2°
0 0	<b>o</b> = 3°
0 0	• = 4°
0 0	<b>O</b> = 1°
0 0	<b>O</b> = 2°
9 9	<b>O</b> = 3°

## # Tuning Tips (cont.)

## **Motor Gearing:**

Proper motor gearing will result in maximum performance and run time while reducing the chance of overheating and premature motor failure. The gear ratio chart lists recommended starting gear ratios for the most widely used motor types. Gear ratios will vary depending upon motor brand, wind, and electronic speed control. Consult your motor and electronic speed control manufacturers for more information. Team Associated is not responsible for motor damage due to improper gearing.

B7 Gear Ratio Chart (Internal Gear Ratio 2.60:1)								
Motor	Pinion	Spur	Final Drive Ratio					
21.5 Reedy S-Plus Brushless	33	72	5.67:1					
17.5 Reedy S-Plus Brushless	29	72	6.45:1					
13.5 Reedy S-Plus Brushless	27	*75	7.22:1					
10.5 Reedy 540-M4 Brushless	24	78	8.45:1					
9.5 Reedy 540-M4 Brushless	23	78	8.82:1					
8.5 Reedy 540-M4 Brushless	22	78	9.22:1					
7.5 Reedy 540-M4 Brushless	21	78	9.65:1					
6.5 Reedy 540-M4 Brushless	20	78	10.14:1					
*75T spur gear (#92294) not included								



### Set The Gear Mesh:

You should be able to rock the spur gear back and forth in the teeth of the pinion gear without making the pinion gear move. If the spur gear mesh is tight, then loosen the #41096 screws (p.19) and move the motor away, then try again.

A gear mesh that is too tight or too loose will reduce power and damage the gear teeth.

## Diff Height Adjustment:

The diff height adjustment (p.12) is a good way to tune the car for grip level. On high grip with low ride heights, a higher diff height will be a good option. On lower grip with higher ride heights, a lower diff height will be better.

## Slipper Clutch:

The assembly instructions give you a base setting for your clutch. Turn the nut on the shaft so that the end of the top shaft is even with the outside of the nut. At the track, tighten or loosen the nut in 1/8 turn increments until you hear a faint slipping sound for 1-2 feet on takeoffs. Another popular way to set the clutch is to hold both rear tires firmly in place and apply short bursts of throttle. If the clutch is properly set, the front tires should lift slightly up off the surface.

#### Caster:

Caster describes the angle of the caster block as it leans toward the rear of the vehicle. Positive caster means the kingpin leans rearward at the top. The kit includes three inserts to adjust caster angle at the caster block, 0°, 2.5°, and +5°. The total caster angle is the sum of the kick-up angle and the caster block angle. Standard total caster angle for the B6 is 30°, with 25° kick-up and +5° caster block angle. For less entry steering and more exit steering, try 0° caster block angle.

## Front Camber:

Camber describes the angle at which the tire and wheel rides when looked at from the front. Negative camber means that the tire leans inward at the top. A good starting camber setting is -1°. Positive camber, where the top of the tire is leaning out, is not recommended. A camber gauge can be used to more accurately set camber.





Testing camber with camber gauge

#### **Rear Camber:**

Camber describes the angle at which the tire and wheel rides when looked at from the back. Negative camber means that the tire leans inward at the top. A good starting camber setting is -1°. Adding a small amount of positive camber, where the top of the tire is leaning out, will tend to improve straight-line acceleration on loose tracks. A camber gauge can be used to more accurately set camber.

RC10 RC10	Driver:	Kit Setup (Dirt) Even	B		Qualify:	Math:	
TEAM KIT	Dates _	Trad	ke		Fildsh:	Best Lep Time:	
Front Suspension:							
Ride Height: 19mm	7	Ball Stud Spacing: 1m	m	16	Steerin	g Bellcrank Position: Up	Down 🗍
Camber: -1 degree	╡	Dan Stad Spacing. 1111	W.		) <u> </u>	g Delici ank i Colsien. Op	DOWN
Toe: O degree	╡	Ball Stud Spacing: Om	m	la constant	Ball Stu	ıd Spacing: 1mm	
Anti-Roll Bar: None	╡	Juli Juliu Spacing. Offi				a opasiig.	8
Arm Type: Kit	Bumn St.	eer Spacing: Omm			Ball Stu	ud Spacing: 1mm	
Tower Type: Kit		On Spacing. Chini		12			<sup>2</sup> 1
Wheel Hex: 5mm	Steering	Plate: +1	5.0mm			, , , , , , , , , , , , , , , , , , , ,	-1
Steering Block KPI: 2		Tiddo.	-(0		-		
Caster Block Insert: 0 -2.5 -5[	╡		A				
Bulkhead Type: Aluminum	=	Tile .					3 2 1
Kick-Up Angle: -2.5 0 +2.5	╡						
Steering Stop Spacing: Omm	╡ ∥		Height:			9	
Caster Block Spacing: Fwd Back		+3 +2	님			C B A	
Notes:		+2			Caster	Block Link Mount: 0	
INUCES.		+0			Front B	Sulkhead Spacing: 1mm	
Rear Suspension:							
Ride Height: 19mm	C Mount	:	Axle He	eight:			_
Camber: -1 degree	Aluminu	m Steel	0 ▼0 3	<b>▲</b> +3		420	9
Anti-Roll Bar: None			0 1 2	<b>A</b> +2		<sup>73</sup> 21	
Arm Type: Kit			<b>Y</b>	-	Ca	amber Link Spacing: 2mm	al
Tower Type: Kit	╡   ‱	3	<b>● ▲</b> 1 2	▼ +1	Ba	all Stud Spacing: 1mm	
Arm Spacing: Fwd Mid Back	<u> </u>		0 40 3	<b>♥</b> +0	Ba	all Stud Spacing: 2mm	
Wheel Hex: 5mm	D Mount	:					
Hub Type: Std HRC	Aluminu	m Steel		N			
Hub Spacing: Fwd Mid Back	<u> </u>					69mm HD	●●● 321 □/
Drive Shaft: CVA's Universals		20000					321
Notes:	₹ 8888					000	
						CBA	
Electronics		Drivetrain:		Shocks			
Radio: Servo:		Differential: Ball	Diff:		Front	Rear	
EPA: Throttle: % Brake:	%	Height: 1 Gea	ır Diff: 🔲	Piston:	2x1.8	2x1.9	
ESC:		Diff Setting:		Thickness	s: 2.5mm	2.5mm	
ESC Settings:				Fluid:	30wt	30wt	
Motor / Wind:	Timing:	Notes:		Spring:	Gray	White	
Pinion: Spur:		Slipper Clutch:		Limiters:	Int: Ex	t: Int: Ext:	
Battery Mount: Std Offset		Type: Std		Stroke:	23mm	28mm	Stroke
		# of Pads: 2x19mi	m	Eyelet:	+2	+4	
Back 1 ■ 2 3 4 5	Forward	Setting:		Cup Offse	et: 0 +5	+9 0 +5 +9	
Battery: Weight:		Notes:		Kashima	Bodies: Chr	rome Shafts: Machined	l Spacers: 🗌
Notes:				Notes:			
Tirack Info:	Tires	•	Body, Wa	elght		Vehicle Comments:	
Size:	Front Tires:		Body:	RC10	B7	Notes:	
Surface:	Front Compo	ound:	Front Win	g: R	C10B7		
Traction:	Front Insert	:	Rear Wing	g: RC	10B7 7"		
Moisture:	Rear Tires:		Wing Angl	le: 0°	3°		
Condition:	Rear Compo	und:	Chassis Le	ength:	0		
	Rear Insert:		Servo Wei	ights:	None		
Temperature:	Wheel (F/R)	1:	Electronic		Aluminum		
Notes:	Notes:						
	Notes:		Total Vehi	cle Weight:		and setup sheets/	

RC19 RC19		Evení	∄		Qualify:	Math:	
	Dates _	Tiraci	ቜ		Finish:	Best Lap Time: _	
Front Suspension:							
Ride Height:		Ball Stud Spacing:	$\neg$	-6	Stagnin	g Bellcrank Position: Up[	□ Down □
Camber:	=	Dail Ocuu Spacilig.			Steering	g belici alik Posicioli. Op [	DOWIT
Toe:	=	Ball Stud Spacing:		in .	Ball Stu	ıd Spacing:	
Anti-Roll Bar:	$\exists$	ball Stud Spacing.			Ball Stu	iu Spacing.	
	Cb.	Ci			Ball Stu	ud Spacing:	
Arm Type:	Bump Sto	eer Spacing:	- 17	<b>1</b>		ud Spacing:	200
Tower Type:		DI.	5.0mr		Ball St.	ли эрасіну.	<sup>3</sup> 2 <sub>1</sub>
Wheel Hex:	Steering	Plate:					
Steering Block KPI:	릚		A			,	a Q
Caster Block Insert: 0 -2.5 -5	╡∊						3 2 1
Bulkhead Type:	<b>≓</b> №						000
<b>Kick-Up Angle</b> : -2.5 □ 0 □ +2.5 [	╣ 1	Axle	Height:				9
Steering Stop Spacing:		+3				000	
Caster Block Spacing: Fwd Back		+2	님		Caston	C B A  Block Link Mount:	ا ا
Notes:		+1 +0	님			Bulkhead Spacing:	
Rear Suspension:		70			Profit B	очклеви эрасіпу.	
Ride Height:	C Mount:		Axle He	eight:			
Camber:	Aluminur	n Steel	<b>● ▼</b> 0 3			( 00	
Anti-Roll Bar:			•			43	21
Arm Type:	$\dashv$		<b>○</b> ▼1 2		Ca	amber Link Spacing:	
Tower Type:	$\exists$		0 1 2	+1		all Stud Spacing:	
Arm Spacing: Fwd Mid Back [	╡  ̄ ̄		<b>△ ▲</b> 0 3	+0	/ <b>=</b>	all Stud Spacing:	
Wheel Hex:	D Mount	:				, ,	
Hub Type: Std HRC	Aluminur						100
Hub Spacing: Fwd Mid Back	╣ └──					4 9 mm 11 D	000
Drive Shaft: CVA's Universals		00000				(C)	321
Notes:	$\exists$					000	
INUCES.	-  *****	3				CBA	
Electronics		Drivetrain:		Shocks			
Radio: Servo:		Differential: Ball	Diff:		Front	Rear	
EPA: Throttle: % Brake:	%	Height: Gea	r Diff: 🔲	Piston:			
ESC:		Diff Setting:		Thicknes	s:	İ	
ESC Settings:				Fluid:			
	Timing:	Notes:		Spring:			
Pinion: Spur:		Slipper Clutch:		Limiters:	Int: Ex	t: Int: Ext:	
Battery Mount: Std Offset		Type:		Stroke:		i	Stroke
		# of Pads:		Eyelet:		İ	
Back 1 2 3 4 5	Forward	Setting:	$\equiv \equiv$	Cup Offse	et: 0 +5	+9 0 +5 +	+9□
Battery: Weight:		Notes:		Kashima			ined Spacers:
Notes:				Notes:			
TrackInfo	Tilres	_	Body, W	elohia		Vehicle Comments	1
Size:	Front Tires:		Body:			Notes:	-
Surface:	Front Compo	ound:	Front Win	ıa:			
Traction:	Front Insert:		Rear Wing				
Moisture:	Rear Tires:		Wing Ang		3°□ 6°□		
Condition:	Rear Compo	und:	Chassis L				
	Rear Insert:		Servo We				
Temperature:	Wheel (F/R)	:	Electronic				
Notes:	Notes:			cle Weight:	:		
							7
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